DOCUMENT RESUME

ED 077 925 SP 006 633

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TITLE Follow-Up of Applicants for Admission to Graduate Programs in Special Education. Occasional Paper #11.
INSTITUTION Minnesota Univ., Minneapolis. Research, Development, and Demonstration Center in Education of Handicapped Children.
SPONS AGENCY Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE Jul 72
GRANT OEG-0-9-332189-4533(032)
NOTE 25p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Academic Rank (Professional); Educational Research; *Educational Status Comparison; *Fellowships; Graduate Students; *Graduate Surveys; *Special Education

ABSTRACT

As one means of assessing the effects of graduate programs and fellowship awards in special education, a survey of the educational and professional status of special education applicants was conducted approximately 4 years after the filing of original applications to graduate school. The survey showed the following results: a) 71 percent of fellowship recipients completed graduate degree programs, 82 percent pursued careers in special education, and 5 percent continued full-time graduate studies; b) 38 percent of graduate students without fellowships earned advanced degree and 62 percent were employed in special education; and c) candidate selection decisions based on the Miller Analogies Test scores and undergraduate grade point average rather than on clinical judgment would have reduced false positives among those accepted into degree programs by 36 percent, thus reducing false negatives by 40 percent. (Seven tables of statistical data are presented.) (BRB)

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TECHNICAL REPORTS

University of Minnesota Research, Development and Demonstration
Center in Education of Handicapped Children

(Place of publication shown in parentheses where applicable.)

1. R. Rubin. Follow-up of applicants for admission to graduate programs in special education. Occasional Paper #11. July, 1972.

2. D. F. Moores. Communication - Some unanswered questions and some unquestioned answers. Occasional Paper #10. July 1972.

3. A. M. Taylor & S. E. Whitely. Overt verbalization and the continued production of effective elaborations by EMR children. Research Report #38. June 1972.

4. K. H. Kiegel. Measuring educationally handicapped children's organizational strategies by sampling overt groupings. Research Report #37. May 1972

5. E. Gallistel, M. Boyle, L. Curran, & M. Hawthorne. The relation of visual and auditory aptitudes to first grade low readers' achievement under sight-word and systematic phonic instruction. Research Report #36. May 1972.

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8. D. Krus & W. Bart. An ordering-theoretic method of multidimensional scaling of items. Research Report #33. March 1972.

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ED 077925

OCCASIONAL PAPER #11

Project No. 332189
Grant No. OE-09-332189-4533 (032)

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FOLLOW-UP OF APPLICANTS FOR ADMISSION TO GRADUATE PROGRAMS IN SPECIAL EDUCATION

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July 1972

The research reported herein was performed pursuant to a grant from the Bureau of Education for the Handicapped, U.S. Office of Education, Department of Health, Education, and Welfare to the Center for Research, Development and Demonstration in Education of Handicapped Children, Department of Special Education, University of Minnesota. Contractors undertaking such projects under government sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official position of the Bureau of Education for the Handicapped.

Department of Health, Education, and Welfare

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SP 006 633

RESEARCH AND DEVELOPMENT CENTER
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The University of Minnesota Research, Development and Demonstration Center in Education of Handicapped Children has been established to concentrate on intervention strategies and materials which develop and improve language and communication skills in young handicapped children.

The long term objective of the Center is to improve the language and communication abilities of handicapped children by means of identification of linguistically and potentially linguistically handicapped children, development and evaluation of intervention strategies with young handicapped children and dissemination of findings and products of benefit to young handicapped children.

Follow-Up of Applicants For Admission To Graduate Programs in Special Education

Rosalyn A. Rubin

Abstract

As one means of assessing the effects of graduate programs and fellowship awards in special education, a survey of the educational and professional status of special education applicants was conducted approximately four years after the filing of original applications to graduate school. It was found that: 1) 71% of fellowship recipients had completed graduate degree programs and 82% were pursuing careers in special education. An additional 5% were continuing their graduate studies on a full-time basis. 2) 38% of those accepted for graduate study without fellowships had earned advanced degrees and 62% were employed in the field of special education. 3) Candidate selection decisions based upon MAT scores and undergraduate GPA rather than upon clinical judgment would have reduced false positives among those accepted into degree programs by 36% while simultaneously reducing false negatives by 40%.

FOLLOW-UP OF APPLICANTS FOR ADMISSION TO GRADUATE PROGRAMS IN SPECIAL EDUCATION[1]

Rosalyn A. Rubin

University of Minnesota

Growing demands for accountability at all levels of education make it increasingly important to examine the impact of resources allocated to training programs in special education upon the development of teachers and other leadership personnel in the field. In assessing the effects of graduate programs it is necessary to consider not only the initial progress of students toward degrees but to extend the evaluation to long range outcomes such as professional functioning of program graduates. The present follow-up survey of special education applicants at the University of Minnesota was undertaken as one facet of a program of evaluation.

Procedure

In the spring of 1971 efforts were made to contact all those who had filed applications for admission to graduate study in the Department of Special Education at the University of Minnesota during the period from January 1, 1966, through September, 1967. Data were collected regarding current educational and occupational status in an effort to determine: (1) the relationship between fellowship awards and successful completion of advanced degree programs, (2) the relationship between graduate training in special education and later professional positions, and (3) procedures for initial selection of program candidates which could improve upon clinical judgments in

differentiating between those who successfully complete programs and those who do not.

Sample

Of the 130 individuals who applied during the specified time period, 91 (70%) were approved for admission to departmental programs. Ten (8%) were awarded Post-M.A. fellowships, 42 (32%) were awarded M.A. level fellowships, 39 (30%) were accepted for graduate study without the offer of fellowships, and 39 (30%) were rejected.

An additional eleven P.M.A. fellowship students who had entered graduate school prior to 1966 but were enrolled in departmental programs during the 1967-68 academic year were included in the section of the study devoted to status of P.M.A. fellowship recipients (Tables 4 and 6) in order to broaden the base of information regarding advanced graduate students. Since returns were obtained from all 21 P.M.A. students there were no problems of sampling error involved.

Insert Table 1 about here

As shown in Table 1, 85 (65%) of the 130 original applicants responded to the survey questionnaire. In almost all instances missing data resulted from inability to locate applicants rather than from failure to return questionnaires. The differences between subgroups divided on the basis of original disposition of applications were due in large part to the availability of more recent address information for individuals who had actually enrolled in departmental programs.

Insert Table 2 about here

A previous study (Rubin, 1967) of the characteristics of this same group of applicants found consistent differences between fellowship, non-fellowship and reject groups on Miller Analogies Test (MAT) raw scores moving in descending order from the P.M.A. fellowship group to the M.A. fellowship recipients, to the accepted non-fellowship students, to the group whose applications were rejected. Despite median difference there was considerable overlap among the MAT raw score distributions of the four groups as shown in Table 2.

It should be noted that MAT scores for the three groups of applicants accepted by the department were considerably above national averages on this instrument. More than a quarter of all fellowship students ranked above the 90th percentile on national norms for graduate students in education at doctorate-granting institutions while three-fourths of the P.M.A. group scored above the 70th percentile on these same norms. According to data presented in the test manual, scores of the special education P.M.A. students were approximately equivalent to scores obtained by students in medicine and psychology and were ahead of students in such fields as engineering, business administration and social work (Miller, 1960). The relatively high ability of the total pool of applicants and particularly of those awarded fellowships should be borne in mind when evaluating the performance of program graduates.

Undergraduate grade point averages (GPA) failed to discriminate among the three groups of students admitted to graduate programs, the median GPA for all three groups fell at 3.0 on a four-point scale (A = 4 points, B = 3 points, etc.). However the GPA of the rejected

group dipped downward with over 75% of this group failing to achieve a 3.0 average.

Results

Data in the present survey were obtained 3.5 years after the most recent application in the study had been processed. Masters' degree programs in the Department of Special Education can be completed in one calendar year while the typical departmental Ph.D. program can be completed in approximately three years of full-time work beyond the M.A. It would therefore appear that sufficient time had elapsed to afford the majority of students the opportunity to complete their programs of study and to gain some experience in their chosen professional fields.

Educational Status

Insert Table 3 about here

Degrees earned by applicants for admission to the department during the period included in this study are reported in Table 3. Of the 38 fellowship recipients who responded to the survey, 28 (74%) had completed graduate degree programs by June, 1971. Seven of the ten P.M.A. fellowship students from the original group of applicants had earned Ph.D. degrees, one had earned a Specialist Certificate in Special Education and one was continuing to work toward the doctoral degree.

Seventeen (61%) of the M.A. fellowship students responding to the survey had earned M.A. degrees, one had earned a Specialist Certificate and one had earned a Ph.D. degree. It should be noted

that the University of Minnesota is one of the relatively few institutions at which a scholarly report of independent research is one of the requirements for the M.A. degree. Almost all M.A. fellowship recipients had satisfactorily completed their course work but a number had not yet completed the research requirement.

Of those applicants admitted to graduate programs without fellowships ten (38%) of the respondents had earned graduate degrees at the time of the survey. Applicants admitted without fellowship awards were, for the most part, unable to devote full time to their graduate studies. Many of these individuals are still continuing their graduate education on a part-time basis. It would therefore be anticipated that the proportion of this group earning graduate degrees would increase in the future.

Five (28%) of those respondents whose applications had been rejected had earned degrees at other institutions. Comparisons between accepted and rejected applicants cannot be regarded as conclusive since to an unknown extent a bias involving "self-fulfilling prophecy" may be influencing the outcome under investigation. Those not admitted to graduate programs are manifestly eliminated from any possibility of earning a degree at this university although the possibility remains that they may earn admission to a similar program elsewhere if their circumstances permit them to consider such alternatives.

Insert Table 4 about here

Table 4 reports the current educational status of the 21 graduate students who received Post-M.A. fellowships during the 1967-68 academic year. Ten of these students began their P.M.A. studies in the fall of 1967 while an additional eleven students were pursuing programs in which they had originally matriculated during the period from 1964-66.

Sixteen (76%) of those receiving P.M.A. fellowships, 69% of the males and 88% of the females, had earned advanced graduate degrees by June, 1971. It took, on the average, 3.6 years of graduate work beyond the M.A. level for students to complete their doctoral programs. If as anticipated, the three students currently enrolled in graduate school do eventually earn advanced degrees it would result in 90% of P.M.A. fellowship recipients having completed special education degree programs beyond the M.A. level.

Professional Status

Insert Table 5 about here

As shown in Table 5 eight of the ten P.M.A. fellowship recipients who entered programs in the fall of 1967 were employed in professional positions related to the field of special education at the time of the survey. Eighty-five percent

of all M.A. fellowship respondents were actively pursuing careers in special education at the time of the survey. More than half (57%) of the M.A. fellowship group were special education teachers while 26% were engaged in special education administration, research, and counseling activities.

Of those accepted without fellowships sixty-two percent held positions in the field of special education. The relatively high proportion of special education administrators (27%) in this group reflects the fact that the majority of these individuals already held administrative positions at the time they applied for admission to graduate school. They were able to pursue their graduate studies on a part-time basis only and were therefore not eligible for fellowships.

Less than half (46%) of the reject respondents held special education positions while 33% are regular class teachers or counselors and 11% are employed in fields outside of education.

Insert Table 6 about here

Table 6 reports the positions currently held by the total group of 21 students who received P.M.A. fellowships during the 1967-68 academic year.

Eighteen (86%) of all P.M.A. recipients were involved in college

teaching, research, administrative or consulting activities in special education. Two additional (10%) members of this group are completing their doctoral studies prior to entering the field.

Clinical vs. actuarial predictions

Insert Table 7 about here

In the time period covered by this study clinical judgments based in part upon consideration of MAT scores and undergraduate GPA and in part upon written recommendations and personal interviews were the basis for decisions regarding acceptance and rejection of applications. As shown in Table 7, eleven (38%) of the M.A. fellowship respondents and 16 (64%) of respondents who had been accepted without fellowships under this selection procedure had failed to earn advanced degrees 3.5 to 4.5 years after matriculation in graduate programs.

The establishment of cut-off points at approximately the 25th percentile on the MAT and GPA distributions of the Minnesota M.A. fellowship group such that an MAT raw score below 51 combined with an undergraduate GPA below 2.8 would automatically have resulted in rejection of the application would have reduced the proportion of drop-outs within the M.A. fellowship group by 36%. It would also have led to the rejection of one individual who did successfully complete a degree program.

Applying the same formula to those accepted without fellowships would have reduced the drop-outs by 25% while losing one individual who completed a degree program. Application of this formula would

also have reduced the false negatives in the reject group by leading to acceptance of 2 of the 5 members of this group who subsequently earned degrees at other institutions.

Summary of results

1) 71% of fellowship recipients had completed graduate degree programs.

2) 62% of those receiving P.M.A. fellowships during the 1967-68 academic year had earned doctoral degrees, and it is anticipated that 90% will eventually complete a degree program beyond the M.A. level. Eighty-six percent of this group were involved in college teaching or in research, administrative, and consulting activities in special education.

3) 68% of M.A. fellowship respondents had earned graduate degrees and 85% were engaged in professional activities in special education.

4) 38% of those respondents accepted for graduate study without fellowships had earned graduate degrees and 62% were employed in the field of special education.

5) Candidate selection decisions based completely upon MAT scores and undergraduate GPA rather than upon clinical judgment would have reduced false positives among those accepted into degree programs by as much as 36% while simultaneously reducing false negatives by 40%

Conclusions

Results indicated that graduate fellowships have enabled highly qualified individuals to enter and remain in graduate school for the relatively extended period of time necessary to earn graduate degrees.

The great majority of those awarded fellowships at the advanced graduate level have completed their degree programs and are presently filling leadership positions in special education both as administrators and consultants in the schools and as teacher trainers and researcher workers at the college level.

Over two-thirds of those awarded M.A. level fellowships have also completed graduate degree programs and 85% are pursuing careers in special education. Almost twice as many of those awarded fellowships at the M.A. level had earned degrees compared to those accepted for graduate study without fellowships. This discrepancy may be at least partially attributed to the opportunity afforded the fellowship recipients to enroll as full-time students free to concentrate upon their graduate studies whereas non-fellowship students typically held full- or part-time positions while attending graduate school.

Contrary to frequently expressed concerns regarding the advisability of investing increasingly scarce resources in the graduate education of women on the grounds that they are less apt to complete programs and to maintain professional positions (Campbell, 1971), results of this survey showed that among the P.M.A. fellowship recipients a higher proportion of women than of men actually completed Ph. D. programs. Eighty-eight percent of women in this group were professionally employed at the time of the survey.

Results also showed that candidate selection procedures based upon objective test scores and previous grades rather than upon clinical judgment would better differentiate between those who successfully complete graduate degree programs and those who do not.

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Footnote

[1]This research was supported in part by a grant to the University of Minnesota Research and Development Center in Education of Handicapped Children (OEG-0-9-332189-4533-032) from the U.S. Office of Education, Bureau of Education for the Handicapped.

TABLE 1

Proportion of Original Applicants Responding to Survey

	Original Applicants	Survey Respondents
Post M.A. Fellowship	10	10 (100%)
M.A. Fellowship	38	28 (74%)
Accepted without Fellowship	39	26 (67%)
Declined Fellowship	4	3 (75%)
Rejected	39	18 (46%)
Total	130	85 (65%)

TABLE 2

Miller Analogies Test Scores of Applicants to Graduate Programs in Special Education at the University of Minnesota During Period of Study

	PMA Fellowship Recipients (N=10)		MA Fellowship Recipients (N=42)[1]		Accepted Non-Fellowship (N=39)		Rejected (N=39)	
	MAT Raw Score	Nat'l[2] %ile	MAT Raw Score	Nat'l %ile	MAT Raw Score	Nat'l %ile	Mat Raw Score	Nat %il
75th %ile	74	(93)	70	(91)	63	(83)	50	(60)
50th %ile	66.5	(87)	60	(79)	54	(67)	32	(20)
25th %ile	55	(70)	46	(50)	41	(40)	25	(07)
Range	41-47		32-91		20-81		16-67	

1 MA Fellowship N includes all applicants who were offered fellowships. Four of these offers were declined.

2 The figures in parentheses are national percentile equivalents for graduate students in education at doctorate-granting institutions.

TABLE 3

Degrees Earned by Applicants for Admission to Graduate Programs in the Department of Special Education During Period of Study

	Survey Respondents	Ph.D.	Specialist	M.A.	Total number of Students earning Degrees
Post-M.A. Fellow.	10	7 (70%)	1 (10%)	-------	8 (80%)
M.A. Fellow	28	1 (04%)	1 (04%)	17 (61%)	19 (68%)
Acc./No Fellow.	26	1 (04%)	1 (04%)	8 (31%)	10 (38%)
Declined Fellow.	3	0	0	1 (33%)	1 (33%)
Rejected	18	1 (06%)	0	4 (22%)	5 (28%)
Total	85	10	3	30	43

TABLE 4

Current Educational Status of Students
Awarded Post-M.A. Fellowships for the 1967-68 Academic Year
(N = 21)[1]

	M (N = 13)	F (N = 8)	Total (N = 21)
Completed Ph.D. Program	7 (54%)	6 (75%)	13 (62%)
Completed Specialist Program	2 (15%)	1 (13%)	3 (14%)
Working toward Grad. Degree	2 (15%)	1 (13%)	3 (14%)
Inactive	2 (15%)	0	2 (10%)
$\bar{x}$ no. of Years to completion of Ph.D.	3.5	3.8	3.6

[1] Includes 11 students who entered advanced graduate programs from 1964-66 in addition to the 10 students matriculating in P-M.A. programs in Fall of 1967.

TABLE 5

Positions Currently Held by Applicants to Graduate Programs from January, 1966 through September, 1967[1]

Position	P-M.A. Fellowship	M.A. Fellowship	Accepted Non-Fellowship	Rejected
Spec. Ed. Teacher		16 (57%)	7 (27%)	4 (22%)
Spec. Ed. Admin.	2 (20%)	5 (18%)	7 (27%)	1 (06%)
Spec. Ed. Research	1 (10%)	1 (04%)		
Spec. Ed. Counselor		1 (04%)	1 (04%)	
School Psychologist			1 (04%)	1 (06%)
Speech Pathologist				1 (06%)
College Teaching	5 (50%)			1 (06%)
Reg. Class Teacher		1 (04%)	8 (31%)	5 (27%)
H.S. Counselor			1 (04%)	1 (06%)
Full-time Grad. Student	1 (10%)	1 (04%)		2 (11%)
Unrelated Field		1 (04%)		2 (11%)
Unemployed	1 (10%)	2 (07%)	1 (04%)	
Total	10 (100%)	28 (100%)	26 (100%)	18 (100%)

[1] Figures in parentheses refer to per cent of those responding to survey questionnaire

TABLE 6

Positions Currently held by Recipients of PMA Fellowships
During the 1967-68 Academic Year

	M	F	Total
College Tchg.	8	3	11
Spec. Ed. Admin.	4	-	4
Spec. Ed. Consult.	-	2	2
Research	-	1	1
Res. Asst./Grad. Student	1	1	2
Unemployed	-	1	1
Total	13	8	21

TABLE 7

Effects of Establishing Proposed Cut-Off Scores on MAT and Undergraduate GPA on Proportion of Candidates Completing Graduate Programs

	M.A. Fellowship Awards			Accepted for Grad. Study without Fellowship		
	Original Awards	Proposed Awards	Reduction in no. of Awards	Original Accepted	Proposed Accepted	Reduction no. Accep
Earned Grad. Degree	18	17	1 (5%)	9	8	1 (11%
Did not earn Grad. Degree	11	7	4 (36%)	16	12	4 (25%
Total	29	24	5 (17%)	25	20	5 (20%

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